

CLAIMS

1. A transformant of *Streptomyces mobaraensis*, comprising a structural gene of transglutaminase derived from *Streptomyces mobaraensis* and a promoter and a terminator acting on the structural gene, which are externally introduced.
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2. The transformant of *Streptomyces mobaraensis* according to claim 1, wherein the promoter is a promoter of transglutaminase derived from *Streptomyces mobaraensis*.
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3. The transformant of *Streptomyces mobaraensis* according to claim 1, wherein the terminator is a terminator of transglutaminase derived from *Streptomyces mobaraensis*.
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4. The transformant of *Streptomyces mobaraensis* according to claim 1, wherein the structural gene comprises a sequence set forth in SEQ ID NO: 1 or a sequence obtained by modifying a part of the sequence, the sequence encoding transglutaminase.
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5. A transformant of *Streptomyces mobaraensis* comprising a DNA fragment having an externally introduced sequence set forth in SEQ ID NO: 2 or sequence obtained by modifying a part of the sequence, the sequence encoding transglutaminase.
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6. The transformant of *Streptomyces mobaraensis* according to claim 1, which is a transformant of *Streptomyces mobaraensis* S-8112 or a mutant strain thereof.
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7. A process for producing transglutaminase, comprising the steps of:
culturing transformant of *Streptomyces mobaraensis* comprising a structural gene of transglutaminase derived from *Streptomyces mobaraensis* and a promoter and a terminator acting on the structural gene, which are externally introduced, under the conditions where the structural gene can be expressed; and
collecting the produced transglutaminase.
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8. The process for producing transglutaminase according to claim 7, wherein the promoter is a promoter of transglutaminase derived from *Streptomyces mobaraensis*.

9. The process for producing transglutaminase according to claim 7, wherein the terminator is a terminator of transglutaminase derived from *Streptomyces mobaraensis*.
10. The process for producing the transglutaminase according to claim 7, wherein
5 the structural gene comprises a sequence set forth in SEQ ID NO: 1 or a sequence obtained by modifying a part of the sequence, the sequence encoding transglutaminase.
11. The process for producing transglutaminase according to claim 7, wherein the transformant of *Streptomyces mobaraensis* comprises a DNA fragment having an
10 externally introduced sequence set forth in SEQ ID NO: 2 or sequence obtained by modifying a part of the sequence, the sequence encoding transglutaminase.
12. The process for producing transglutaminase according to claim 7, wherein the transformant of *Streptomyces mobaraensis* is a transformant of *Streptomyces*
15 *mobaraensis* S-8112 or a mutant strain thereof.
13. A transformant of *Streptomyces lividans* comprising a structural gene of transglutaminase derived from *Streptomyces mobaraensis*, and a promoter and a terminator acting on the structural gene, which are externally introduced.
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14. The transformant of *Streptomyces lividans* according to claim 13, wherein the promoter is a promoter of transglutaminase derived from *Streptomyces mobaraensis*.
15. The transformant of *Streptomyces lividans* according to claim 13, wherein the
25 terminator is a terminator of transglutaminase derived from *Streptomyces mobaraensis*.
16. The transformant of *Streptomyces lividans* according to claim 13, wherein the structural gene comprises a sequence set forth in SEQ ID NO: 1 or a sequence obtained by modifying a part of the sequence, the sequence encoding transglutaminase.
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17. A transformant of *Streptomyces lividans* comprising a DNA fragment having an externally introduced sequence set forth in SEQ ID NO: 2 or sequence obtained by modifying a part of the sequence, the sequence encoding transglutaminase.
18. The transformant of *Streptomyces lividans* according to claim 13, which is a
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transformant of *Streptomyces lividans* 3131 or a mutant strain thereof.

19. A process for producing transglutaminase, comprising the steps of:
culturing transformant of *Streptomyces lividans* comprising a structural gene
5 of transglutaminase derived from *Streptomyces mobaraensis*, and a promoter and a
terminator acting on the structural gene, which are externally introduced, under the
conditions where the structural gene can be expressed; and
collecting the produced transglutaminase.
- 10 20. The process for producing transglutaminase according to claim 19, wherein
the promoter is a promoter of transglutaminase derived from *Streptomyces
mobaraensis*.
- 15 21. The process for producing transglutaminase according to claim 19, wherein
the terminator is a terminator of transglutaminase derived from *Streptomyces
mobaraensis*.
22. The process for producing transglutaminase according to claim 19, wherein
the structural gene comprises a sequence set forth in SEQ ID NO: 1 or a sequence
20 obtained by modifying a part of the sequence, the sequence encoding transglutaminase.
- 23 The process for producing transglutaminase according to claim 19, wherein
the transformant of *Streptomyces lividans* comprises a DNA fragment having an
externally introduced sequence set forth in SEQ ID NO: 2 or sequence obtained by
25 modifying a part of the sequence, the sequence encoding transglutaminase.
24. The process for producing transglutaminase according to claim 19, wherein
the transformant of *Streptomyces lividans* is a transformant of *Streptomyces lividans*
3131 or a mutant strain thereof.